

Two New Species of *Aristida* (Poaceae) from Brazil

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ABSTRACT. Two new species of the “Ripariae” group of *Aristida* are described and illustrated: *A. brasiliensis* is distinguished by the lower glume, which is shorter than the upper one, and by the pubescent collar; *A. constricta* by the articulation at the base of the long column of the lemma. A key to the group is provided.

The genus *Aristida* L. comprises about 280 species from tropical and subtropical areas. During the revision of this genus for Brazil, two new species were found and are described in this paper. Specimens of both species had been previously identified as different species by earlier authors and can be included in the “Ripariae” group discussed by Henrard (1928, 1932). According to Henrard, this group includes *A. riparia* Trin. & Rupr., *A. megapotamica* Sprengel, *A. oligospira* Trin., and *A. trinii* Henrard, and is characterized by the spikelike panicles and the lower glume longer than the upper one. Actually, *A. trinii* does not belong to this group due to its linear and subdense, rather than spikelike, panicle and shorter spikelets. On the other hand, the inclusion of *A. brasiliensis* in this group, based on its habit and spikelike panicle, enlarges the circumscription of the “Ripariae” because *A. brasiliensis* has the lower glume shorter than the upper one. These species can be distinguished by the following characteristics.

KEY TO THE TAXA OF *ARISTIDA* GROUP RIPARIAE

- 1a. Callus of the lemma obtuse *A. oligospira*
- 1b. Callus of the lemma acute or bifid.
 - 2a. Lower glume shorter than the upper one; collar pubescent *A. brasiliensis*
 - 2b. Lower glume longer than the upper one; collar glabrous.
 - 3a. Callus of the lemma bifid *A. riparia*
 - 3b. Callus of the lemma acute.
 - 4a. Lemma articulated at the base of the 10–15-mm-long column *A. constricta*
 - 4b. Lemma not articulated; column 29–60 mm long.
 - 5a. Awns of the lemma contorted at the base
. *A. megapotamica*
var. *megapotamica*
 - 5b. Awns of the lemma straight at the base *A. megapotamica*
var. *brevipes*

Aristida brasiliensis Longhi-Wagner, sp. nov.
TYPE: Brazil. Minas Gerais: ca. 12 km from Barão de Cocais, base of Serra do Caraça, 28 Jan. 1971, H. S. Irwin et al. 29325 (holotype, SP; isotypes, MO, NY, UB). Figure 1.

Perennis, 65–120 cm alta. Laminae supra glabrae saepe pilis sparsis longis ad basin praedictae, 25–50 cm longae, 0.25–0.35 cm latae, culmorum inferne planae, recurvatae, superne convolutae; ligula ciliata, ca. 0.2 mm longa; collum pubescens. Panicula spiciformis, densa, 16–23 cm longa. Glumae uninervatae, scabrae, inferiores 15.5–20 mm longae (aristae 5–8 mm longae computatae), superiores 23.5–28 mm longae (aristae 7–10 mm longae computatae). Lemma 33–39 mm longum (callo et columna computatis), columna 23–29 mm longa, callo acuto, 1 mm longo; aristae rectae, centralis 47–59 mm longa, laterales 40–53 mm longae.

Perennial, caespitose, 65–120 cm tall. Sheaths longer than the internodes, glabrous, sparsely long bearded at the summit especially in the innovations, with deciduous hairs to 2 mm long, collar pubescent; ligule ciliate, ca. 0.2 mm long; blade 25–50 cm long, 0.25–0.35 cm wide, abaxially scabrous, glabrous or sparsely hairy near the base (hairs ca. 2 mm long), flat and recurved at the base, convolute upward. Panicle dense and spikelike, 16–23 cm long, 3–6 cm wide (including the awns), erect. Glumes lanceolate, acuminate, awned, 1-nerved, the lower 15.5–20 mm long (including the 5–8-mm-long awns), 0.5–0.8 mm wide (lateral view), densely scabrous, the upper ones 23.5–28 mm long (including the 7–10-mm-long awns), 0.5–0.7 mm wide, minutely scabrous. Lemma cylindrical, smooth, 33–39 mm long (including the twisted 23–29-mm-long column and the acute and hairy 1-mm-long callus); awns straight, the central one 47–59 mm long, the lateral ones 40–53 mm. Palea hyaline, 2 mm long, 0.5 mm wide, acute, 2-nerved. Lodicules 2, hyaline, 1.5 mm long, 0.3 mm wide. Stamens 3. Caryopsis 5.5 mm long, 0.6 mm wide.

Distribution and ecology. Brazil, from Minas Gerais to Santa Catarina. It is most common in campo rupestre and cerrado vegetation, up to 1,400 m.

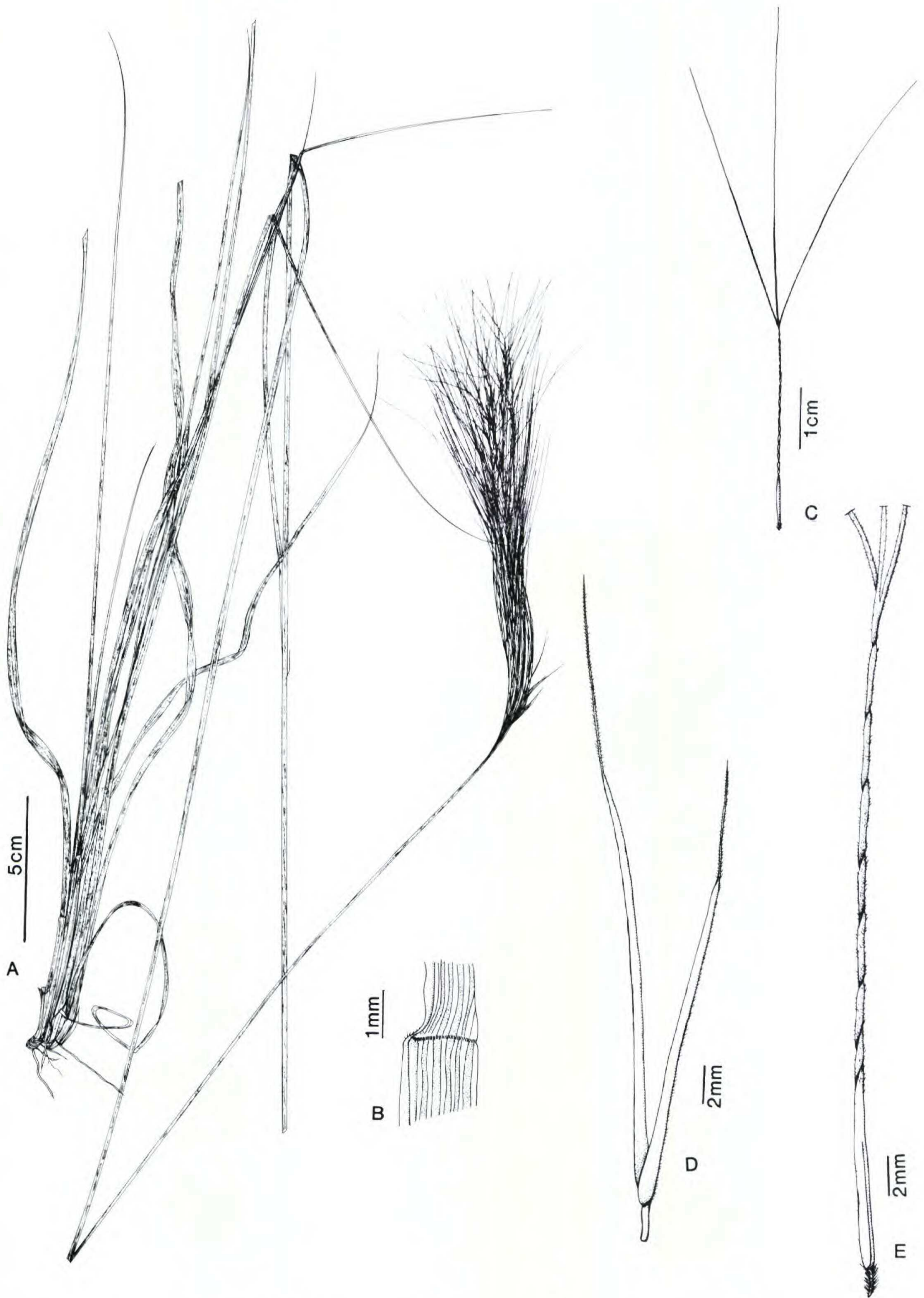


Figure 1. *Aristida brasiliensis* Longhi-Wagner. — A. Habit. — B. Pubescent collar. — C. Anthecium. — D. Glumes, lateral view. — E. Lemma, awns partially removed. (Irwin et al. 28819.)

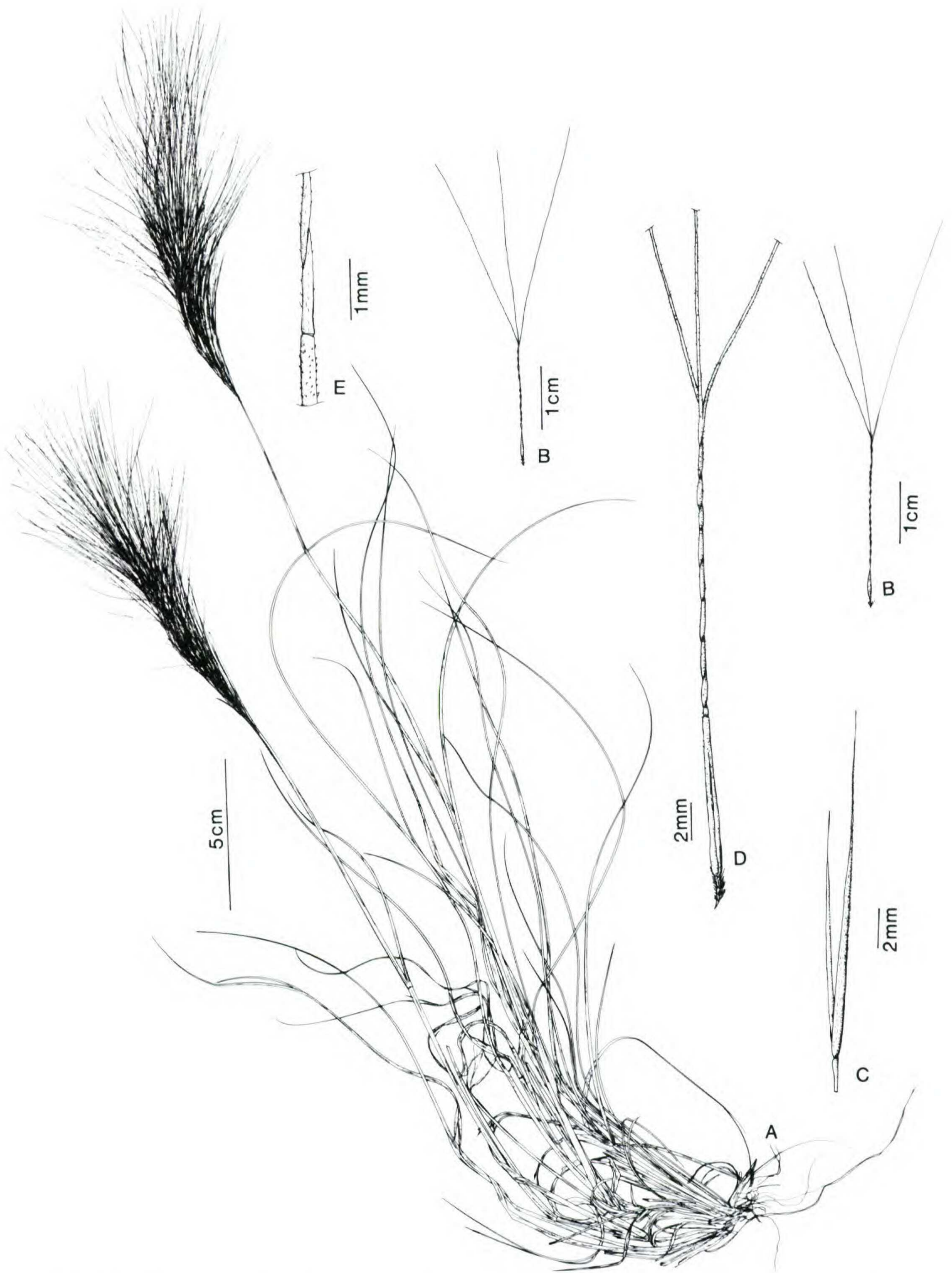


Figure 2. *Aristida constricta* Longhi-Wagner. — A. Habit. — B. Anthercia. — C. Glumes, lateral view. — D. Lemma, awns partially removed. — E. Lemma apex with an articulation. (Longhi-Wagner et al. 1562.)

Paratypes. BRAZIL. MINAS GERAIS: ca. 10 km W of Barão de Cocais, 22 Jan. 1971, *H. S. Irwin et al.* 28819 (UB); Diamantina, 8 km E Diamantina, road to Extração, 16 Mar. 1970, *H. S. Irwin et al.* 27687 (MO, NY, UB), km 996–997.5 antiga ferrovia Diamantina–Corinto, 12 Feb. 1982, *A. G. Burman & T. Sendulsky* 767 (SP), Serra de San Antonio, 27–30 Dec. 1929, *Chase* 10395 (MO, US); Santa Barbara, Serra do Caraça, 22 Jan. 1972, *A. Macedo* 5230 (HB, MBM, MO). SÃO PAULO: campos de Bocaina, 6 Apr. 1894, *A. Loefgren* 2364 (SP). SANTA CATARINA: Lages, Morro do Pinheiro Seco, 19 Feb. 1971, *L. B. Smith & Klein* 15926 (HBR).

Aristida brasiliensis is closely related to *A. megapotamica* var. *brevipes* Henrard from Brazil, sharing a similar habit and panicle morphology, but can be distinguished by the characteristics cited in the key. In addition, *A. megapotamica* var. *brevipes* has a longer column (29–49 mm long) and callus (1.2–2 mm long). It is also closely related to *A. spiciformis* Ell., from North America. They are similar in habit, panicle, and relative length of the glumes. However, *A. spiciformis* differs in its characteristic glumes, which are shorter and abruptly long awned, spreading awns of the lemma, longer callus (1.5–2 mm long), and the absence of a pubescent collar. Henrard (1933) cited *Chase* 10395 as a paratype of *A. megapotamica* var. *brevipes*. It is possible that Henrard did not notice the differences in the length of the glumes and the pubescent collar. The cited collection agrees perfectly with the new species described here.

Most of the paratypes now identified as *A. brasiliensis* were previously referred to *A. implexa* Trin., which is a synonym of *A. megapotamica*.

Aristida constricta Longhi-Wagner, sp. nov.

TYPE: Brazil. Rio Grande do Sul: Santana do Livramento, Cerro Palomas, 17 Nov. 1987, *Longhi-Wagner et al.* 562 (holotype, ICN; isotype, MO). Figure 2.

Perennis, 24–46 cm alta. Laminae glabrae, 10–33 cm longae, 0.2–0.35 cm latae, culmorum inferne planae, recurvatae, superne convolutae; ligula ciliata, ca. 0.2 mm longa; collum glabrum. Panicula spiciformis, densa, 10–15 cm longa. Glumae uninervatae, inferiores 16–19.5 mm longae (aristae 4–6 mm longae computatae), scabrae, superiores 13–15 mm longae (aristae 2–2.5 mm longae computatae), laeves. Lemma 18–22 mm longum (callo et columna computatis), in basi columna constrictum, articulatum; columna 10–15 mm longa; callo acuto, 1.2–1.3 mm longo; aristae rectae, centralis 32–40 mm longa, laterales 26–32 mm longae.

Perennial, caespitose, 24–46 cm tall. Sheaths longer than the internodes, glabrous, sparsely long bearded at the summit especially in the innovations, with deciduous hairs; ligule ciliate, ca. 0.2 mm long; collar glabrous; blade 10–33 cm long, 0.2–0.35 cm

wide, abaxially and marginally scabrous. Panicle dense and spikelike, 10–15 cm long, 5–6 mm wide, erect. Glumes lanceolate, acute, short awned, 1-nerved, the lower 16–19.5 mm long (including the 4–6-mm-long awns), 0.7 mm wide (lateral view), densely scabrous, the upper one 13–15 mm (including the 2–2.5-mm-long awns), 0.5 mm wide, smooth. Lemma cylindrical, constricted and articulated at the base of column, 18–22 mm long (including the twisted and 10–15-mm-long column and the 1.2–1.3 mm, acute callus); callus hairy except for the upper 0.2–0.3 mm of the apex, which is glabrous and forms a conspicuous and curved beak; awns straight, the central one 32–40 mm long, the lateral ones 26–32 mm long. Palea hyaline, acute, 2-nerved, subequal to the lodicules, 1.4–1.6 mm long, 0.3–0.4 mm wide. Lodicules 2, hyaline, linear, 1.4 mm long, 0.1 mm wide. Stamens 3.

Distribution and ecology. According to the data presently available, *Aristida constricta* has a restricted distribution in southwestern Rio Grande do Sul, Brazil. It is common on basalt crevices and on the top and slopes of hills.

Paratypes. BRAZIL. RIO GRANDE DO SUL: Santana do Livramento, Cerro Armour, 17 Nov. 1987, *Longhi-Wagner et al.* 1574 (ICN), Cerro Palomas, 25 Nov. 1972, *Valls & Barcellos* 2527 (ESAL, ICN), Mar. 1991, *Valls et al.* 12773 (CEN, ICN); São Francisco de Assis, 23 Nov. 1972, *Valls & Barcellos* 2470 (ICN).

The most distinctive characteristic of *Aristida constricta* is the presence of a constriction at the base of the lemma column, which represents an articulation point; this allows the awns and column to be easily detached from the lemma.

Specimens of *A. constricta* have been cited as *A. trinii* Henrard by Severo (1982) for Rio Grande do Sul, Brazil. In fact, *A. trinii* was described from central Brazil and does not occur in Rio Grande do Sul. *Aristida trinii* has a subdense panicle and lacks an articulation at the lemmas.

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